# TO: Mail Stop 8 Director of the U.S. Patent & Trademark Office P.O. Box 1450 Alexandria, VA 22313-1450

# REPORT ON THE FILING OR DETERMINATION OF AN ACTION REGARDING A PATENT OR TRADEMARK

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filed in the U.S. Di	istrict Court Northern	District of California on the following Patents of	r 🗆 Trademarks:	
DOCKET NO.	DATE FILED	U.S. DISTRICT COURT		
CV 10-05437 RS	12/1/10	450 Golden Gate Avenue, P.O. Box 36060,	San Francisco, CA 94102	
PLAINTIFF PANAPUG PAG		DEFENDANT  PRO A DOOM CORPOR A TIC	NAT.	
RAMBUS INC		BROADCOM CORPORATIO	JIN .	
PATENT OR	DATE OF PATEN		ADEMARK .	
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2 3 4 5	re—entitled case, the follow	wing decision has been rendered or judgement issued:  (BY) DEPUTY CLERK Sheila Rash	DATE December 1, 2010	

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royalties from companies like Broadcom whose products utilize Rambus's patented technology; indeed, Broadcom told the FTC that such a remedy "is required" in order to prevent Rambus from being "allowed to continue to enforce its patents against those that wish to practice the JEDEC SDRAM standards to manufacture SDRAMs or complementary components such as microprocessors."

- The FTC issued its final order on February 2, 2007, in which it declined to impose the 48. "no-enforcement" remedy advocated by Broadcom. On April 22, 2008, the United States Court of Appeals for the District of Columbia vacated even the lesser remedy the FTC had imposed, holding that the FTC had failed to demonstrate that Rambus's conduct was unlawful. Rambus v. Fed. Trade Comm'n, 522 F.3d 456 (D.C. Cir. 2008). The FTC ultimately dismissed its complaint against Rambus.
- Rambus is informed and believes, and thereupon alleges, that despite the rejection of 49. its proposed "no enforcement" remedy, Broadcom continued its knowing infringement of Rambus's patents even after the FTC's remedy order was issued and later vacated.
- Rambus is informed and believes, and thereupon alleges, that Broadcom's knowing 50. infringement continued despite further information regarding infringement provided by Rambus in the course of attempting to negotiate a license with Broadcom that would fairly compensate Rambus for Broadcom's use of patents owned or exclusively licensed by Rambus. For example, on or about December 6, 2006, Rambus provided information to Broadcom regarding the infringement of the '916 Patent and other patents by Broadcom products. On or about December 7, 2009, Rambus provided information to Broadcom regarding the infringement of the '195 Patent, the '097 Patent, the '937 Patent, the '916 Patent, the '281 Patent, the '037 Patent, the '020 Patent, the '696 Patent, the '997 Patent, the '405 Patent, the '353 Patent, and the '109 Patent by Broadcom products. On or about September 29, 2010, Rambus provided information to Broadcom regarding the infringement of the '555 Patent, the '474 Patent, the '857 Patent, the '858 Patent, and the '494 Patent by Broadcom products.
- Rambus is informed and believes, and thereupon alleges, that Broadcom has sold or 51. offered to sell its Accused Products to third parties who incorporate the Accused Products into their

own products. Those third parties in turn have made, used, sold, offered for sale, and/or imported and/or continue to make, use, sell, offer for sale, and/or import their own products in the United States. These activities undertaken by the third parties constitute acts of direct infringement of the Asserted Patents. The memory controllers and peripheral interfaces in Broadcom's Accused Products are known by Broadcom to be especially made or especially adapted for use in infringement of the Asserted Patents and are not staple articles or commodities of commerce suitable for substantial non-infringing use. Broadcom has therefore contributed to and continues to contribute to the infringement of the Asserted Patents. Rambus is informed and believes, and thereupon alleges, that, by its sales and/or 52. offers for sale of the Accused Products to third parties, Broadcom also has induced and continues to induce acts by third parties that Broadcom knew or should have known would constitute direct infringement of the Asserted Patents. Broadcom actively induces infringement of the Asserted 53.

Patents by designing the Accused Products to be capable of infringement and by promoting and encouraging the use of its products by the third parties in ways that infringe the Asserted Patents. Rambus is entitled to recover from Broadcom the actual damages it sustained as a result of Broadcom's wrongful acts alleged herein under 35 U.S.C. § 284 in an amount to be proven

- Rambus is informed and believes, and thereupon alleges, that Broadcom's 54. infringement of the Asserted Patents as set forth herein has been and is willful, deliberate and in disregard of Rambus's patent rights, and Rambus is therefore entitled to increased damages up to three times the amount of actual damages and attorneys' fees, pursuant to 35 U.S.C. §§ 284, 285.
- Broadcom's infringement of the Asserted Patents will continue to damage Rambus, 55. causing irreparable harm for which there is no adequate remedy at law, unless it is enjoined by this Court.

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### COUNT I

(Patent Infringement of U.S. Patent No. 6,034,918 Under 35 U.S.C. § 271, et seq.)

- 56. Rambus incorporates by reference and realleges paragraphs 1 through 55 above as though fully restated herein.
- 57. Rambus is informed and believes, and thereupon alleges, that Broadcom: (1) has infringed claims of the '918 Patent, literally and/or under the doctrine of equivalents, by making, using, offering to sell, selling (directly or through intermediaries), and/or importing Accused Products consisting of or including SDR, DDR-type, and/or GDDR-type memory controllers, and mobile and/or low power versions thereof, in this district and elsewhere in the United States, and/or (2) has contributed to the literal infringement and/or infringement under the doctrine of equivalents of claims of the '918 Patent, and/or has actively induced others to infringe claims of the '918 Patent,

# literally and/or under the doctrine of equivalents, in this district and elsewhere in the United States. COUNT II

(Patent Infringement of U.S. Patent No. 6,038,195 Under 35 U.S.C. § 271, et. seq.)

- 58. Rambus incorporates by reference and realleges paragraphs 1 through 57 above as though fully restated herein.
- infringed claims of the '195 Patent, literally and/or under the doctrine of equivalents, by making, using, offering to sell, selling (directly or through intermediaries), and/or importing Accused Products consisting of or including SDR, DDR-type, and/or GDDR-type memory controllers, and mobile and/or low power versions thereof, in this district and elsewhere in the United States, and/or (2) has contributed to the literal infringement and/or infringement under the doctrine of equivalents of claims of the '195 Patent, and/or has actively induced others to infringe claims of the '195 Patent, literally and/or under the doctrine of equivalents, in this district and elsewhere in the United States.

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27 28 (Patent Infringement of U.S. Patent No. 6,260,097 Under 35 U.S.C. § 271, et. seq.)

- Rambus incorporates by reference and realleges paragraphs 1 through 59 above as 60. though fully restated herein.
- Rambus is informed and believes, and thereupon alleges, that Broadcom: (1) has 61. infringed claims of the '097 Patent, literally and/or under the doctrine of equivalents, by making, using, offering to sell, selling (directly or through intermediaries), and/or importing Accused Products consisting of or including DDR-type and/or GDDR-type memory controllers, and mobile and/or low power versions thereof, in this district and elsewhere in the United States, and/or (2) has contributed to the literal infringement and/or infringement under the doctrine of equivalents of claims of the '097 Patent, and/or has actively induced others to infringe claims of the '097 Patent, literally and/or under the doctrine of equivalents, in this district and elsewhere in the United States.

#### COUNT IV

(Patent Infringement of U.S. Patent No. 6,304,937 Under 35 U.S.C. § 271, et. seq.)

- Rambus incorporates by reference and realleges paragraphs 1 through 61 above as 62. though fully restated herein.
- Rambus is informed and believes, and thereupon alleges, that Broadcom: (1) has 63. infringed claims of the '937 Patent, literally and/or under the doctrine of equivalents, by making, using, offering to sell, selling (directly or through intermediaries), and/or importing Accused Products consisting of or including DDR-type and/or GDDR-type memory controllers, and mobile and/or low power versions thereof, in this district and elsewhere in the United States, and/or (2) has contributed to the literal infringement and/or infringement under the doctrine of equivalents of claims of the '937 Patent, and/or has actively induced others to infringe claims of the '937 Patent, literally and/or under the doctrine of equivalents, in this district and elsewhere in the United States.

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#### COUNT V

#### (Patent Infringement of U.S. Patent No. 6,426,916 Under 35 U.S.C. § 271, et. seq.)

- 64. Rambus incorporates by reference and realleges paragraphs 1 through 63 above as though fully restated herein.
- 65. Rambus is informed and believes, and thereupon alleges, that Broadcom: (1) has infringed claims of the '916 Patent, literally and/or under the doctrine of equivalents, by making, using, offering to sell, selling (directly or through intermediaries), and/or importing Accused Products consisting of or including SDR, DDR-type, and/or GDDR-type memory controllers, and mobile and/or low power versions thereof, in this district and elsewhere in the United States, and/or (2) has contributed and continues to contribute to the literal infringement and/or infringement under the doctrine of equivalents of claims of the '916 Patent, and/or has actively induced others to infringe claims of the '916 Patent, literally and/or under the doctrine of equivalents, in this district

#### COUNT VI

#### (Patent Infringement of U.S. Patent No. 6,564,281 Under 35 U.S.C. § 271, et. seq.)

- 66. Rambus incorporates by reference and realleges paragraphs 1 through 65 above as though fully restated herein.
- 67. Rambus is informed and believes, and thereupon alleges, that Broadcom: (1) has infringed claims of the '281 Patent, literally and/or under the doctrine of equivalents, by making, using, offering to sell, selling (directly or through intermediaries), and/or importing Accused Products consisting of or including SDR, DDR-type, and/or GDDR-type memory controllers, and mobile and/or low power versions thereof, in this district and elsewhere in the United States, and/or (2) has contributed to the literal infringement and/or infringement under the doctrine of equivalents of claims of the '281 Patent, and/or has actively induced others to infringe claims of the '281 Patent, literally and/or under the doctrine of equivalents, in this district and elsewhere in the United States.

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(Patent Infringement of U.S. Patent No. 6,584,037 Under 35 U.S.C. § 271, et. seq.)

Rambus incorporates by reference and realleges paragraphs 1 through 67 above as 68. though fully restated herein.

Rambus is informed and believes, and thereupon alleges, that Broadcom: (1) has 69. infringed claims of the '037 Patent, literally and/or under the doctrine of equivalents, by making, using, offering to sell, selling (directly or through intermediaries), and/or importing Accused Products consisting of or including DDR2, DDR3, and/or GDDR3 memory controllers, and mobile and/or low power versions thereof, in this district and elsewhere in the United States, and/or (2) has contributed to the literal infringement and/or infringement under the doctrine of equivalents of claims of the '037 Patent, and/or has actively induced others to infringe claims of the '037 Patent, literally and/or under the doctrine of equivalents, in this district and elsewhere in the United States.

#### COUNT VIII

(Patent Infringement of U.S. Patent No. 6,715,020 Under 35 U.S.C. § 271, et. seq.)

- Rambus incorporates by reference and realleges paragraphs 1 through 69 above as 70. though fully restated herein.
- Rambus is informed and believes, and thereupon alleges, that Broadcom: (1) has 71. infringed claims of the '020 Patent, literally and/or under the doctrine of equivalents, by making, using, offering to sell, selling (directly or through intermediaries), and/or importing Accused Products consisting of or including SDR, DDR-type, and/or GDDR-type memory controllers, in this district and elsewhere in the United States, and/or (2) has contributed to the literal infringement and/or infringement under the doctrine of equivalents of claims of the '020 Patent, and/or has actively induced others to infringe claims of the '020 Patent, literally and/or under the doctrine of equivalents, in this district and elsewhere in the United States.

Complaint for Patent Infringement and Jury Demand Case No.

 (Patent Infringement of U.S. Patent No. 6,751,696 Under 35 U.S.C. § 271, et. seq.)

- 72. Rambus incorporates by reference and realleges paragraphs 1 through 71 above as though fully restated herein.
- 73. Rambus is informed and believes, and thereupon alleges, that Broadcom: (1) has infringed and continues to infringe claims of the '696 Patent, literally and/or under the doctrine of equivalents, by making, using, offering to sell, selling (directly or through intermediaries), and/or importing Accused Products consisting of or including DDR-type and/or GDDR-type memory controllers, and mobile and/or low power versions thereof, in this district and elsewhere in the United States, and/or (2) has contributed and continues to contribute to the literal infringement and/or infringement under the doctrine of equivalents of claims of the '696 Patent, and/or has actively induced and continues to actively induce others to infringe claims of the '696 Patent, literally and/or under the doctrine of equivalents, in this district and elsewhere in the United States.

#### COUNT X

(Patent Infringement of U.S. Patent No. 7,209,997 Under 35 U.S.C. § 271, et. seq.)

- 74. Rambus incorporates by reference and realleges paragraphs 1 through 73 above as though fully restated herein.
- 75. Rambus is informed and believes, and thereupon alleges, that Broadcom: (1) has infringed and continues to infringe claims of the '997 Patent, literally and/or under the doctrine of equivalents, by making, using, offering to sell, selling (directly or through intermediaries), and/or importing Accused Products consisting of or including SDR, DDR-type, and/or GDDR-type memory controllers, and mobile and/or low power versions thereof, in this district and elsewhere in the United States; and/or (2) has contributed and continues to contribute to the literal infringement and/or infringement under the doctrine of equivalents of claims of the '997 Patent, and/or has actively induced and continues to actively induce others to infringe claims of the '997 Patent, literally and/or under the doctrine of equivalents, in this district and elsewhere in the United States.

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(Patent Infringement of U.S. Patent No. 6,470,405 Under 35 U.S.C. § 271, et. seq.)

- 76. Rambus incorporates by reference and realleges paragraphs 1 through 75 above as though fully restated herein.
- 77. Rambus is informed and believes, and thereupon alleges, that Broadcom: (1) has infringed and continues to infringe claims of the '405 Patent, literally and/or under the doctrine of equivalents, by making, using, offering to sell, selling (directly or through intermediaries), and/or importing Accused Products consisting of or including DDR-type and/or GDDR-type memory controllers, and mobile and/or low power versions thereof, in this district and elsewhere in the United States, and/or (2) has contributed and continues to contribute to the literal infringement and/or infringement under the doctrine of equivalents of claims of the '405 Patent, and/or has actively induced and continues to actively induce others to infringe claims of the '405 Patent, literally and/or under the doctrine of equivalents, in this district and elsewhere in the United States.

#### **COUNT XII**

(Patent Infringement of U.S. Patent No. 6,591,353 Under 35 U.S.C. § 271, et. seq.)

- 78. Rambus incorporates by reference and realleges paragraphs 1 through 77 above as though fully restated herein.
- 79. Rambus is informed and believes, and thereupon alleges, that Broadcom: (1) has infringed and continues to infringe claims of the '353 Patent, literally and/or under the doctrine of equivalents, by making, using, offering to sell, selling (directly or through intermediaries), and/or importing Accused Products consisting of or including DDR-type and/or GDDR-type memory controllers, and mobile and/or low power versions thereof, in this district and elsewhere in the United States, and/or (2) has contributed and continues to contribute to the literal infringement and/or infringement under the doctrine of equivalents of claims of the '353 Patent, and/or has actively induced and continues to actively induce others to infringe claims of the '353 Patent, literally and/or under the doctrine of equivalents, in this district and elsewhere in the United States.

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(Patent Infringement of U.S. Patent No. 7,287,109 Under 35 U.S.C. § 271, et. seq.)

- Rambus incorporates by reference and realleges paragraphs 1 through 79 above as 80. though fully restated herein.
- Rambus is informed and believes, and thereupon alleges, that Broadcom: (1) has 81. infringed and continues to infringe claims of the '109 Patent, literally and/or under the doctrine of equivalents, by making, using, offering to sell, selling (directly or through intermediaries), and/or importing Accused Products consisting of or including DDR-type and/or GDDR-type memory controllers, and mobile and/or low power versions thereof, in this district and elsewhere in the United States, and/or (2) has contributed and continues to contribute to the literal infringement and/or infringement under the doctrine of equivalents of claims of the '109 Patent, and/or has actively induced and continues to actively induce others to infringe claims of the '109 Patent, literally and/or under the doctrine of equivalents, in this district and elsewhere in the United States.

#### COUNT XIV

(Patent Infringement of U.S. Patent No. 6,542,555 Under 35 U.S.C. § 271, et. seq.)

- Rambus incorporates by reference and realleges paragraphs 1 through 81 above as 82. though fully restated herein.
- Rambus is informed and believes, and thereupon alleges, that Broadcom: (1) has 83. infringed and continues to infringe claims of the '555 Patent, literally and/or under the doctrine of equivalents, by making, using, offering to sell, selling (directly or through intermediaries), and/or importing Accused Products consisting of or including PCI Express peripheral interfaces, in this district and elsewhere in the United States, and/or (2) has contributed and continues to contribute to the literal infringement and/or infringement under the doctrine of equivalents of claims of the '555 Patent, and/or has actively induced and continues to actively induce others to infringe claims of the '555 Patent, literally and/or under the doctrine of equivalents, in this district and elsewhere in the United States.

 (Patent Infringement of U.S. Patent No. 7,099,404 Under 35 U.S.C. § 271, et. seq.)

- 84. Rambus incorporates by reference and realleges paragraphs 1 through 83 above as though fully restated herein.
- 85. Rambus is informed and believes, and thereupon alleges, that Broadcom: (1) has infringed and continues to infringe claims of the '404 Patent, literally and/or under the doctrine of equivalents, by making, using, offering to sell, selling (directly or through intermediaries), and/or importing Accused Products consisting of or including PCI Express peripheral interfaces, in this district and elsewhere in the United States, and/or (2) has contributed and continues to contribute to the literal infringement and/or infringement under the doctrine of equivalents of claims of the '404 Patent, and/or has actively induced and continues to actively induce others to infringe claims of the '404 Patent, literally and/or under the doctrine of equivalents, in this district and elsewhere in the United States.

#### COUNT XVI

#### (Patent Infringement of U.S. Patent No. 7,580,474 Under 35 U.S.C. § 271, et. seq.)

- 86. Rambus incorporates by reference and realleges paragraphs 1 through 85 above as though fully restated herein.
- 87. Rambus is informed and believes, and thereupon alleges, that Broadcom: (1) has infringed and continues to infringe claims of the '474 Patent, literally and/or under the doctrine of equivalents, by making, using, offering to sell, selling (directly or through intermediaries), and/or importing Accused Products consisting of or including PCI Express peripheral interfaces, in this district and elsewhere in the United States, and/or (2) has contributed and continues to contribute to the literal infringement and/or infringement under the doctrine of equivalents of claims of the '474 Patent, and/or has actively induced and continues to actively induce others to infringe claims of the '474 Patent, literally and/or under the doctrine of equivalents, in this district and elsewhere in the United States.

ZOO DEC LEDAL GREGORY P. STONE (SBN 078329) gregory.stone@mto.com HEATHER E. TAKAHASHI (SBN 245845) heather.takahashi@mto.com MUNGER, TOLLES & OLSON LLP 355 South Grand Avenue, 35th Floor Los Angeles, CA 90071-1560 Telephone: (213) 683-9100 Facsimile: (213) 687-3702 PETER A. DETRE (SBN 182619) peter,detre@mto.com MUNGER, TOLLES & OLSON LLP F-filing 560 Mission Street, 27th Floor San Francisco, CA 94105 Telephone: (415) 512-4000 10 Facsimile: (415) 512-4077 11 Attorneys for Plaintiff RAMBUS INC. 12 UNITED STATES DISTRICT COURT NORTHERN DISTRICT OF CALIFORNIA 13 5437 14 15 CASE NO. RAMBUS INC., 16 COMPLAINT FOR PATENT Plaintiff, INFRINGEMENT 17 v. DEMAND FOR JURY TRIAL 18 BROADCOM CORPORATION, 19 Defendant. 20 21 22 23 24 25 26 27 28

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Complaint for Patent Infringement

and Jury Demand

Case No.

(Patent Infringement of U.S. Patent No. 7,602,857 Under 35 U.S.C. § 271, et. seq.)

- 88. Rambus incorporates by reference and realleges paragraphs 1 through 87 above as though fully restated herein.
- 89. Rambus is informed and believes, and thereupon alleges, that Broadcom: (1) has infringed and continues to infringe claims of the '857 Patent, literally and/or under the doctrine of equivalents, by making, using, offering to sell, selling (directly or through intermediaries), and/or importing Accused Products consisting of or including PCI Express peripheral interfaces, in this district and elsewhere in the United States, and/or (2) has contributed and continues to contribute to the literal infringement and/or infringement under the doctrine of equivalents of claims of the '857 Patent, and/or has actively induced and continues to actively induce others to infringe claims of the '857 Patent, literally and/or under the doctrine of equivalents, in this district and elsewhere in the United States.

#### **COUNT XVIII**

(Patent Infringement of U.S. Patent No. 7,602,858 Under 35 U.S.C. § 271, et. seq.)

- 90. Rambus incorporates by reference and realleges paragraphs 1 through 89 above as though fully restated herein.
- 91. Rambus is informed and believes, and thereupon alleges, that Broadcom: (1) has infringed and continues to infringe claims of the '858 Patent, literally and/or under the doctrine of equivalents, by making, using, offering to sell, selling (directly or through intermediaries), and/or importing Accused Products consisting of or including PCI Express peripheral interfaces, in this district and elsewhere in the United States, and/or (2) has contributed and continues to contribute to the literal infringement and/or infringement under the doctrine of equivalents of claims of the '858 Patent, and/or has actively induced and continues to actively induce others to infringe claims of the '858 Patent, literally and/or under the doctrine of equivalents, in this district and elsewhere in the United States.

#### COUNT XIX

(Patent Infringement of U.S. Patent No. 7,715,494 Under 35 U.S.C. § 271, et. seq.)

- 92. Rambus incorporates by reference and realleges paragraphs 1 through 91 above as though fully restated herein.
- 93. Rambus is informed and believes, and thereupon alleges, that Broadcom: (1) has infringed and continues to infringe claims of the '494 Patent, literally and/or under the doctrine of equivalents, by making, using, offering to sell, selling (directly or through intermediaries), and/or importing Accused Products consisting of or including PCI Express peripheral interfaces, in this district and elsewhere in the United States, and/or (2) has contributed and continues to contribute to the literal infringement and/or infringement under the doctrine of equivalents of claims of the '494 Patent, and/or has actively induced and continues to actively induce others to infringe claims of the '494 Patent, literally and/or under the doctrine of equivalents, in this district and elsewhere in the United States.

#### VI.

#### PRAYER FOR RELIEF

WHEREFORE, Plaintiff Rambus asks this Court to enter judgment in its favor against Broadcom and grant the following relief:

- A. An adjudication that Broadcom has infringed and continues to infringe the Asserted Patents as alleged above;
- B. An accounting of all damages sustained by Rambus as a result of Broadcom's acts of infringement of the Asserted Patents;
- C. An award to Rambus of actual damages adequate to compensate Rambus for Broadcom's acts of patent infringement, together with prejudgment and postjudgment interest;
- D. An award to Rambus of enhanced damages, up to and including trebling of Rambus's damages pursuant to 35 U.S.C. § 284 for Broadcom's willful infringement of the Asserted Patents;

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1	E. An award of Rambus's costs of suit and reasonable attorneys' fees pursuant to 35		
2	U.S.C. § 285 due to the exceptional nature of this case, or as otherwise permitted by law;		
3	F. A grant of a permanent injunction pursuant to 35 U.S.C. § 283, enjoining		
4	Broadcom, and each of its agents, servants, employees, principals, officers, attorneys, successors,		
5	assignees, and all those in active concert or participation with Broadcom, including related		
6	individuals and entities, customers, representatives, OEMs, dealers, and distributors from further acts		
7	of (1) infringement, (2) contributory infringement, and (3) active inducement to infringe with respect		
8	to the claims of the Asserted Patents;		
9	G. Any further relief that this Court deems just and proper.		
10	VII.		
11	JURY DEMAND		
12	Plaintiff Rambus requests a jury trial on all issues triable to a jury in this matter.		
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14	Respectfully Submitted,		
15	DATED: December 1, 2010 MUNGER, TOLLES & OLSON LLP		
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17	By: Lea Later		
18	PETER A. DETRE		
19	Attorneys for Plaintiff RAMBUS INC.		
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Plaintiff Rambus Inc. ("Rambus") states the following as its Complaint against Defendant Broadcom Corporation ("Broadcom"): I. THE PARTIES

- Plaintiff Rambus is a Delaware corporation with its principal place of business at 1. 1050 Enterprise Way, Sunnyvale, California 94089.
- Rambus is informed and believes, and thereupon alleges, that defendant Broadcom is 2. a California corporation with its headquarters located at 5300 California Avenue, Irvine, California 92617. Upon information and belief, Broadcom has substantial contacts and transacts substantial business, either directly or through its agent, on an ongoing basis in this judicial district and elsewhere in the United States. For example, upon information and belief, Broadcom maintains a major office and conducts business at 190 Mathilda Place, Sunnyvale, California 94086, and conducts business at additional offices in San Jose and Santa Clara, California.
- Unless specifically stated otherwise, the acts complained of herein were committed 3. by, on behalf of, and/or for the benefit of Broadcom.

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#### NATURE OF THE ACTION

- This is an action for patent infringement. 4.
- Rambus is informed and believes, and thereupon alleges, that Broadcom has been 5. and/or is infringing, contributing to the infringement of, and/or actively inducing others to infringe claims of U.S. Patent No. 6,034,918 (the "'918 Patent"), U.S. Patent No. 6,038,195 (the "'195 Patent"), U.S. Patent No. 6,260,097 (the "'097 Patent"), U.S. Patent No. 6,304,937 (the "'937 Patent"), U.S. Patent No. 6,426,916 (the "'916 Patent"), U.S. Patent No. 6,470,405 (the "'405 Patent"), U.S. Patent No. 6,542,555 (the "'555 Patent"), U.S. Patent No. 6,564,281 (the "'281 Patent"), U.S. Patent No. 6,584,037 (the "'037 Patent"), U.S. Patent No. 6,591,353 (the "'353 25 Patent"), U.S. Patent No. 6,715,020 (the "'020 Patent"), U.S. Patent No. 6,751,696 (the "'696 26 Patent"), U.S. Patent No. 7,099,404 (the "'404 Patent"), U.S. Patent No. 7,209,997 (the "'997 27 Patent"), U.S. Patent No. 7,287,109 (the "'109 Patent"), U.S. Patent No. 7,580,474 (the "'474 28

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8. Venue is proper in this Court pursuant to 28 U.S.C. §§ 1391(b), 1391(c), 1391(d) and/or 1400(b) because a substantial part of the events giving rise to Rambus's claims occurred in the Northern District of California and because Broadcom is subject to personal jurisdiction in the Northern District of California.

IV.

#### FACTUAL BACKGROUND

#### A. Rambus

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9. Rambus is one of the world's leading designers of semiconductor interface technologies that are used in a broad range of consumer, computing, and communications applications. In addition to the development of high-speed interfaces, Rambus's breakthrough technology and unparalleled engineering expertise have solved the most challenging interface problems and have brought industry-leading products to market. Rambus's interface solutions have enabled state-of-the-art performance in many products, such as personal computers, workstations, servers, gaming consoles, televisions, Blu-ray players, set-top boxes, printers, video projectors, network switches, modems, routers, mobile phones, and graphics cards.

10. In the late 1980s, Michael Farmwald and Mark Horowitz, the founders of Rambus, recognized and set out to solve the "memory bottleneck problem," the failure of memory interfaces

to keep pace with the exponential growth in microprocessor speed. Farmwald and Horowitz's inventions enabled a dynamic random access memory (DRAM) memory architecture that achieved data transmission rates of 500 megahertz, at a time when other DRAM chips were running in the range of 20-30 megahertz.

- 11. Since its founding in 1990, Rambus has continued to design, develop, market, and license its high speed interface technology. Rambus's inventions include new memory devices, new controllers for controlling such memory devices, and new systems incorporating those memory devices and memory controllers. Rambus's inventions also include new transmitters and receivers and interface technology.
- 12. Rambus has made large-scale investments in the exploitation of its technology and a large number of companies have paid for licenses to its patents. Rambus has granted licenses of varying scope to its technology to many of the world's largest semiconductor manufacturers.
- 13. Since 1990, Rambus has spent millions of dollars on research and development of its valuable technology. Rambus relies on the United States patent system to protect the technology resulting from its research and development. Rambus's continued success depends on its research and development of memory interface and other solutions, as well as the protection of intellectual property in its innovative technology.

#### B. <u>Asserted Patents</u>

- 14. On April 18, 1990, U.S. Patent Application No. 07/510,898 was filed naming Michael Farmwald and Mark Horowitz as inventors. The Asserted Patents claiming priority to this application are referred to herein as the "Farmwald/Horowitz Patents."
- 15. On October 19, 1995, U.S. Patent Application No. 08/545,292 was filed naming Richard M. Barth and other individuals as inventors. The Asserted Patents claiming priority to this application are referred to herein as the "Barth Patents."
- 16. On June 20, 1997, U.S. Provisional Patent Application No. 60/050,098 was filed, on June 23, 1997, U.S. Patent Application No. 08/880,980 was filed, and on June 25, 1997, U.S. Patent Application No. 08/882,252 was filed, each naming William J. Dally as inventor. The Asserted Patents claiming priority to these applications are referred to herein as the "Dally Patents."

17. On March 7, 2000, U.S. Patent No. 6,034,918, titled "Method of Operating a Memory Having a Variable Data Output Length and a Programmable Register," was duly and legally issued to Rambus, as assignee of named inventors Michael Farmwald and Mark Horowitz.

- 18. On March 14, 2000, U.S. Patent No. 6,038,195, titled "Synchronous Memory Device Having a Delay Time Register and Method of Operating Same," was duly and legally issued to Rambus, as assignee of named inventors Michael Farmwald and Mark Horowitz.
- 19. On July 10, 2001, U.S. Patent No. 6,260,097, titled "Method and Apparatus for Controlling a Synchronous Memory Device," was duly and legally issued to Rambus, as assignee of named inventors Michael Farmwald and Mark Horowitz.
- 20. On October 16, 2001, U.S. Patent No. 6,304,937, titled "Method of Operation of a Memory Controller," was duly and legally issued to Rambus, as assignee of named inventors Michael Farmwald and Mark Horowitz.
- 21. On July 30, 2002, U.S. Patent No. 6,426,916, titled "Memory Device Having a Variable Data Output Length and a Programmable Register," was duly and legally issued to Rambus, as assignee of named inventors Michael Farmwald and Mark Horowitz.
- 22. On May 13, 2003, U.S. Patent No. 6,564,281, titled "Synchronous Memory Device Having Automatic Precharge," was duly and legally issued to Rambus, as assignee of named inventors Michael Farmwald and Mark Horowitz.
- 23. On June 24, 2003, U.S. Patent No. 6,584,037, titled "Memory Device Which Samples Data After an Amount of Time Expires," was duly and legally issued to Rambus, as assignee of named inventors Michael Farmwald and Mark Horowitz.
- 24. On March 30, 2004, U.S. Patent No. 6,715,020, titled "Synchronous Integrated Circuit Device," was duly and legally issued to Rambus, as assignee of named inventors Michael Farmwald and Mark Horowitz.
- 25. On June 15, 2004, U.S. Patent No. 6,751,696, titled "Memory Device Having a Programmable Register," was duly and legally issued to Rambus, as assignee of named inventors Michael Farmwald and Mark Horowitz.

- 26. On April 24, 2007, U.S. Patent No. 7,209,997, titled "Controller Device and Method for Operating Same," was duly and legally issued to Rambus, as assignee of named inventors
  - The Farmwald/Horowitz Patents include claims directed to improving the mance of memory controllers.
  - 28. At all relevant times, Rambus has been the owner of the entire right, title, and interest each of the Farmwald/Horowitz Patents.
- 29. On October 22, 2002, U.S. Patent No. 6,470,405, titled "Protocol for Communication with Dynamic Memory," was duly and legally issued to Rambus, as assignee of Richard M. Barth
- 30. On July 8, 2003, U.S. Patent No. 6,591,353, titled "Protocol for Communication with Dynamic Memory," was duly and legally issued to Rambus, as assignee of Richard M. Barth and the other inventors named therein
- 31. On October 23, 2007, U.S. Patent No. 7,287,109, titled "Method of Controlling a Memory Device Having a Memory Core," was duly and legally issued to Rambus, as assignee of Richard M. Barth and the other inventors named therein.
- 32. The Barth Patents include claims directed to improving the performance of memory controllers.
- 33. At all relevant times, Rambus has been the owner of the entire right, title, and interest in each of the Barth Patents.

#### 3. Dally Patents

- 34. On April 1, 2003, U.S. Patent No. 6,542,555, titled "Digital Transmitter With Equalization," was duly and legally issued to the Massachusetts Institute of Technology ("MIT"), as assignee of named inventor William J. Dally.
- 35. On August 29, 2006, U.S. Patent No. 7,099,404, titled "Digital Transmitter," was duly and legally issued to MIT, as assignee of named inventor William J. Dally.

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 On August 25, 2009, U.S. Patent No. 7,580,474, titled "Digital Transmitter," was duly and legally issued to MIT, as assignee of named inventor William J. Dally.

- 37. On October 13, 2009, U.S. Patent No. 7,602,857, titled "Digital Transmitter," was duly and legally issued to MIT, as assignee of named inventor William J. Dally.
- 38. On October 13, 2009, U.S. Patent No. 7,602,858, titled "Digital Transmitter," was duly and legally issued to MIT, as assignee of named inventor William J. Dally.
- On May 11, 2010, U.S. Patent No. 7,715,494, titled "Digital Transmitter," was duly and legally issued to MIT, as assignee of named inventor William J. Dally.
- 40. The Dally Patents include claims directed to improving the performance of digital communications.
- 41. At all relevant times, the Dally Patents have been owned by MIT. MIT has exclusively licensed the Dally Patents to Rambus, subject only to any rights retained by the United States federal government pursuant to 35 U.S.C. §§ 201-211, with the right to sublicense, and the right to prosecute any past, present, or future infringement of the Dally Patents.

### C. Broadcom's Acts of Infringement

of the aforementioned memory controllers.

- 42. Rambus is informed and believes, and thereupon alleges, that Broadcom has made, used, sold, imported and/or offered for sale, and/or continued to make, use, sell, import and/or offer for sale, products in the United States consisting of or including DRAM memory controllers, including SDR (Single Data Rate) memory controllers, DDR-type memory controllers (including DDR or Double Data Rate memory controllers, DDR2 or Double Data Rate 2 memory controllers,
- and DDR3 or Double Data Rate 3 memory controllers), GDDR-type memory controllers (including GDDR3 or Graphic Double Data Rate 3 memory controllers), and mobile and/or low power versions
- 43. Rambus is informed and believes, and thereupon alleges, that Broadcom has made, used, sold, imported and/or offered for sale, and/or continued to make, use, sell, import and/or offer for sale, products in the United States consisting of or including high-speed SerDes interfaces, including PCI Express peripheral interfaces.

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44. The aforementioned Broadcom products are hereinafter referred to collectively as the "Accused Products." The Accused Products include at least products that are part of, for example, Broadcom's Broadband Communications, Mobile & Wireless, and Network Infrastructure product lines.

- 45. Broadcom's making, use, sale, offers for sale, and/or importation of the Accused Products in the United States constitute acts of direct infringement of the Asserted Patents.
- A6. In early July 2006, Rambus contacted Broadcom regarding its unlicensed use of Rambus's inventions. In a teleconference between the companies on July 21, 2006, Rambus explained that a number of its patents were infringed by Broadcom's products and thus Broadcom was required to take a license from Rambus. On July 24, 2006, Rambus followed up with correspondence listing dozens of specific examples of Broadcom products using Rambus's patented technology, including enterprise networking, broadband communications, and mobile and wireless products. The companies then scheduled an in-person meeting to take place on August 23, 2006 at Broadcom's headquarters in Irvine. However, Broadcom subsequently cancelled the meeting, stating that it wished to postpone any meeting until after the United States Federal Trade Commission (the "FTC") had issued a remedy in *In the Matter of Rambus, Inc.*, FTC Docket No. 9302 (the "FTC Action"), in which the FTC had charged Rambus with anticompetitive conduct with respect to its behavior as a member of the JEDEC standards-setting organization.
  - 47. On September 15, 2006, Broadcom, together with Freescale Semiconductor, Inc., submitted an arnicus brief in the FTC Action (the "Amicus Brief"). In the Amicus Brief, Broadcom admitted that Rambus had patents that read on methods and products implementing at least JEDEC's SDRAM, DDR SDRAM, and DDR2 SDRAM standards. Broadcom explained to the FTC that Broadcom's products that include memory controllers "themselves comply with the JEDEC SDRAM standards" because they "must be compatible with the memory they are controlling," and therefore are subject to Rambus's patents. Broadcom alleged that Rambus was acting unlawfully in attempting to enforce its patents and that Broadcom was a "direct victim" of Rambus's conduct because "Rambus already has asserted" patents that read on SDR, DDR, and DDR2 memory controllers against Broadcom. Broadcom urged the FTC to prohibit Rambus from collecting